

Work Order ID 100911

100911

Page 1

May-01-13 7:18:18 AM

Item ID: D3954-1

Accept.

N900040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: GWT Pin

Start Date: 4/25/13 Start Qty: 12.00

12

Cust Item ID:

Required Date: 4/30/13 Req'd Qty: 12.00

12

Customer:

Reference:

Approvals: Process Plan: MCS Date: 13-05-03 Tooling:

Date:

Run Start *NR1*

QC: Date: SPC (Y/N):

Date:

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr	Revision Nbr
D3954	D

100

0.00

100

Doosan

Doosan Lathe

Memo

0.00

1-Turn as per folio FA824 & dwg D3954

FOLIO REV: AK

DWG REV: 5

2-Deburr as required

13.5.4

12

DA 04 8-89

110

QC2- Inspect parts off machine FAI/FAIB

0.00

110

QC

Quality Control

Memo

0.00

13.5.4

12

DA 04 8-89

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

DQA: _____ Date: _____

QA Closed: _____ Date: _____

Work Order: _____ Part No. _____ NCR No. _____				DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>		AGAINST DEPARTMENT/PROCESS <div style="display: flex; justify-content: space-between;"> <div> Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/> </div> <div> Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite <input type="checkbox"/> </div> <div> Water Jet <input type="checkbox"/> Prod. Eng. Coord. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier <input type="checkbox"/> </div> <div> Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other <input type="checkbox"/> </div> </div>					
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector		
Doc/Data <input type="checkbox"/>											
Equip/Tooling <input type="checkbox"/>											
Operator <input type="checkbox"/>											
Material <input type="checkbox"/>											
Setup <input type="checkbox"/>											
Other <input type="checkbox"/>											
Process <input type="checkbox"/>											
Supplier <input type="checkbox"/>											
Training <input type="checkbox"/>											
Unapproved <input type="checkbox"/>											

FAULT CATEGORY			
Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio	<input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions	<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge <input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other

Work Order ID 100911

100911

Page 2

May-01-13 7:18:18 AM

Item ID: D3954-1

Accept

N900040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: GWT Pin

Start Date: 4/25/13 Start Qty: 12.00

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Cust Item ID:

Required Date: 4/30/13 Req'd Qty: 12.00

12

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start *NR1*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120	QC8- Inspect parts - second check	0.00							
120									
QC	Memo	0.00							
Quality Control									
150	Identify as per dwg & Stock Location	0.00							
150									
Packaging	Memo	0.00							
Packaging									
160	QC21- Final Inspection - Work Order Release	0.00							
160									
QC	Memo	0.00							
Quality Control									

B.A 13/05/06

12

0

DAS
08
9-89

ST 677

12x

SP
13-5-7

13/5/8

pl 13-05-7

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

DQA: _____ Date: _____

QA Closed: _____ Date: _____

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>	AGAINST DEPARTMENT/PROCESS <div style="display: flex; justify-content: space-between;"> <div> Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/> </div> <div> Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite <input type="checkbox"/> </div> <div> Water Jet <input type="checkbox"/> Prod. Eng. Coord. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier <input type="checkbox"/> </div> <div> Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other <input type="checkbox"/> </div> </div>
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Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data									
Equip/Tooling									
Operator									
Material									
Setup									
Other									
Process									
Supplier									
Training									
Unapproved									

FAULT CATEGORY

Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio	<input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions
-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

☐ Ovalized
☐ Over/Under tolerance
☐ Part Incorrect
☐ Part Lost/Missing
☐ Part Moved
☐ Positioned Wrong
☐ Power Loss/Surge

☐ Pressure/Forced
☐ Temperature/Cure
☐ Weld
☐ Wrong Stock Pulled
☐ Other

Picklist Print

May-01-13 7:18:18 AM

Page 1

Work Order ID: 100911

Parent Item: D3954-1

Parent Item Name: GWT Pin

Start Date: 4/25/13

Required Date: 4/30/13

Start Qty: 12.00

Required Qty: 12.00

Comments: IPP REV:A 11.08.16 AS PER REV.C DD VERF:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M303R1.000		Purchased	No			100	f	99.8403	0.24	2.88			
303 Round Bar 1.00													

Location	Loc Qty	Loc Code
MAT028	99.84031579	
120866	1.4	
121070	6.63031579	
121282	0.9	
121728	3.034	
122386	14.926	
123294	5	
124711 ✓	67.95	

13.5.4

DAS
04
8-8

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

DQA: _____ Date: _____

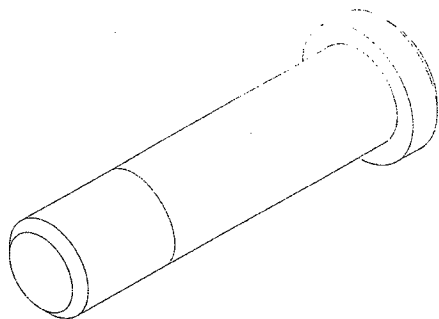
QA Closed: _____ Date: _____

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>	AGAINST DEPARTMENT/PROCESS <table style="width: 100%;"> <tr> <td>Skid-tube <input type="checkbox"/></td> <td>Crosstube <input type="checkbox"/></td> <td>Water Jet <input type="checkbox"/></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>	
Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>															
Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>															
Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>															
Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>																

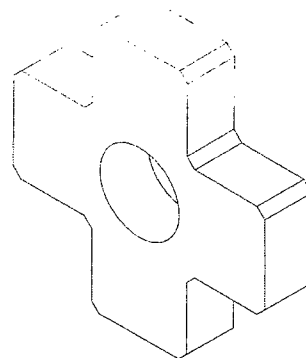
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data									
Equip/Tooling									
Operator									
Material									
Setup									
Other									
Process									
Supplier									
Training									
Unapproved									

FAULT CATEGORY

Landing Gear	General	Other
<input type="checkbox"/> Bending	<input type="checkbox"/> Bend	<input type="checkbox"/> Grain
<input type="checkbox"/> Centre Not Concentric to O/S	<input type="checkbox"/> BOM/Route	<input type="checkbox"/> Hardware
<input type="checkbox"/> Cracks	<input type="checkbox"/> Broken/Damaged	<input type="checkbox"/> Inspection Incomplete
<input type="checkbox"/> Crushed/Crimped	<input type="checkbox"/> Burrs	<input type="checkbox"/> Instructions Incomplete/Unclear
<input type="checkbox"/> Cuffs	<input type="checkbox"/> Contamination	<input type="checkbox"/> Maintenance
<input type="checkbox"/> Heat Treat	<input type="checkbox"/> Countersink	<input type="checkbox"/> Mislabelled
<input type="checkbox"/> Inspection Strip in Tube	<input type="checkbox"/> Cut Too Short	<input type="checkbox"/> Misread
<input type="checkbox"/> Ripples in Bend	<input type="checkbox"/> Drill Holes	<input type="checkbox"/> Offset
<input type="checkbox"/> Torque Waves in Extrusion	<input type="checkbox"/> Drawing	<input type="checkbox"/> Out of Calibration
<input type="checkbox"/> Turning Sequence	<input type="checkbox"/> Finish	<input type="checkbox"/> Out of Sequence
<input type="checkbox"/> Wave/Twist in Tube	<input type="checkbox"/> Folio	<input type="checkbox"/> Outside Dimensions
		<input type="checkbox"/> Ovalized
		<input type="checkbox"/> Over/Under tolerance
		<input type="checkbox"/> Part Incorrect
		<input type="checkbox"/> Part Lost/Missing
		<input type="checkbox"/> Part Moved
		<input type="checkbox"/> Positioned Wrong
		<input type="checkbox"/> Power Loss/Surge
		<input type="checkbox"/> Pressure/Forced
		<input type="checkbox"/> Temperature/Cure
		<input type="checkbox"/> Weld
		<input type="checkbox"/> Wrong Stock Pulled
		<input type="checkbox"/> Other

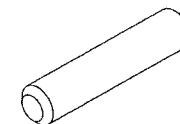


D3954-1 GWT PIN

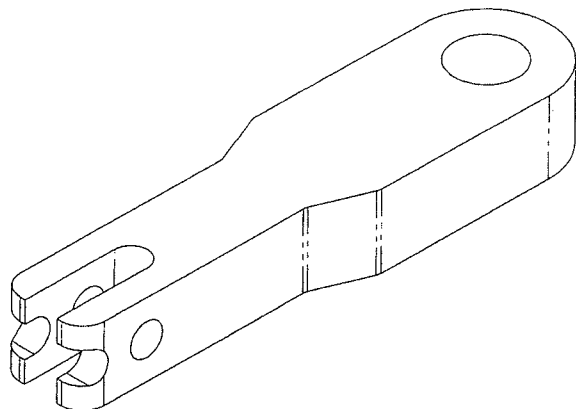


D3954-3 GWT KNOB

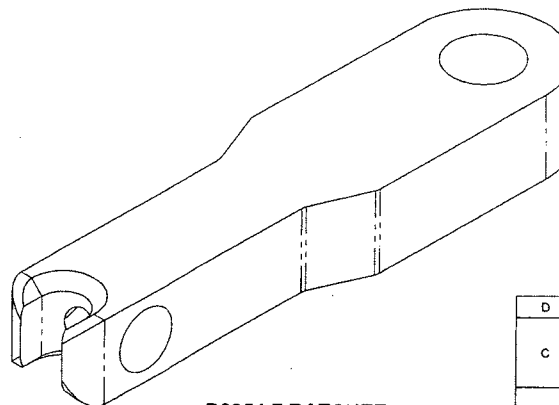
100911 MCT
13-05-03



D3954-9 GWT CHAIN PIN



D3954-5 CHAIN LUG

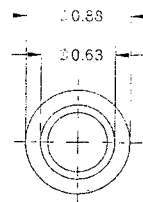


D3954-7 RATCHET LUG

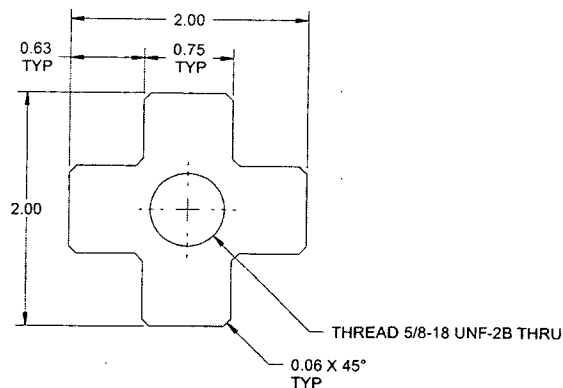
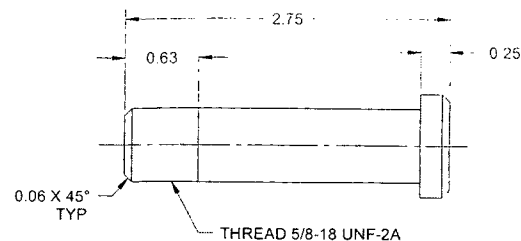
RELEASED
2012-10-01

D	ZN A6-2, A6-3. REVISED NOTE 2 TO ADD POWDER COAT.	DC	12.08.10
C	MATERIAL UPDATE FOR D3954-1/-3: NOW STAINLESS STEEL ONLY (A8-2); FINISH CHANGED TO "NONE" FOR D3954-1/-3 (A8-2); TOLERANCE ON Ø0.750 WAS Ø0.75 MAX (D3-3 & D7-3); D3954-9 NOW A PURCHASED PART (A2/A8-3). REASON: PAR11-113.	MB	11.07.27
B	MATERIAL UPDATE FOR ALL COMPONENTS WAS STAINLESS STEEL IS CARBON STEEL FOR ALL COMPONENTS. FINISH FOR ALL COMPONENTS WAS RED POWDER COAT IS YELLOW SPRAY PAINT.	AJS	09.10.15
A	NEW ISSUE	AJS	09.05.26
REV.	DESCRIPTION	BY	DATE
DESIGN	AJS/DSTOW	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	DC		
CHECKED	AS	DRAWING NO.	REV. D
MFG. APPR.	AS	D3954	SHEET 1 OF 3
APPROVED	AD	TITLE	SCALE
DE APPR.	N/A	MISC MACHINED PARTS GWT KIT	NTS
DATE	12.08.10	<small>COPYRIGHT © 2009 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	

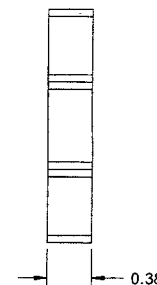
100911



D3954-1 GWT PIN



D3954-3 GWT KNOB

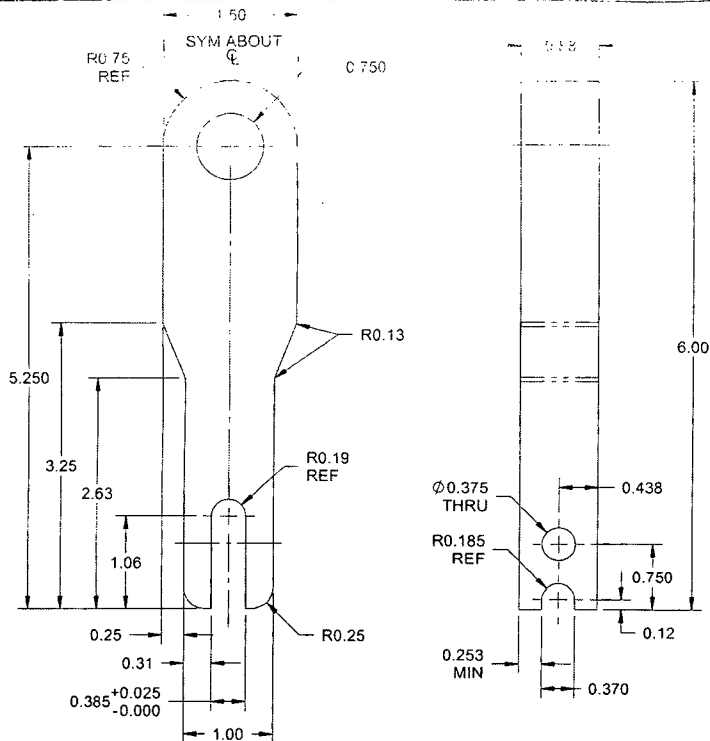


NOTES:

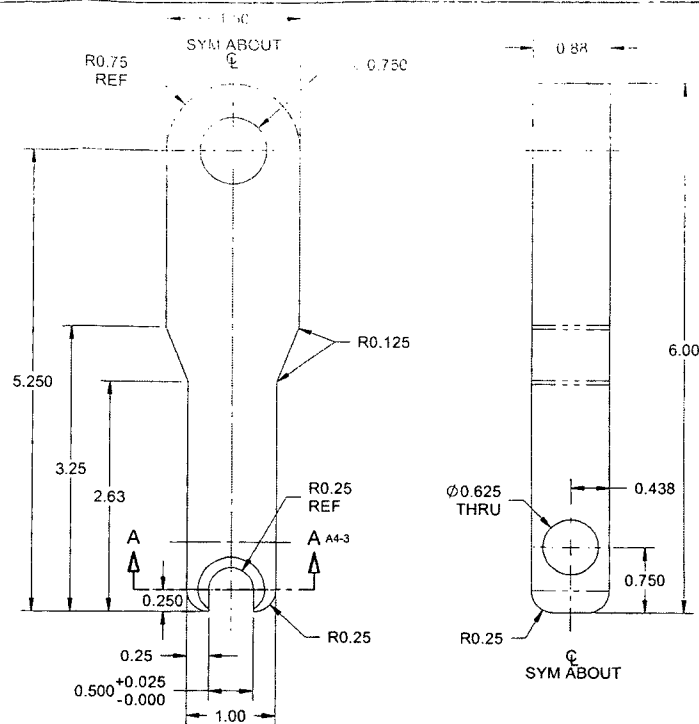
- 1) MATERIAL -1: AISI 303/304/316 STAINLESS STEEL ROUND BAR
PER ASTM A582 (303) OR ASTM A276 (304/316)
REF DART SPEC M303R OR M304R
- 3: AISI 303/304/316 STAINLESS STEEL SHEET
PER MIL-S-5059 OR AMS 5513 (304) OR AMS 5524 (316)
OR ASTM A240 OR ASME SA240
REF DART SPEC M303S OR M304S
OR:
AISI 303/304/316 STAINLESS STEEL BAR OR AISI 304/316 PLATE
PER ASTM A582 (303) OR A276 (304/316) OR ASTM A240 (304/316)
REF DART SPEC M303B OR M304B
- 2) FINISH: SPRAY PAINT YELLOW WITH BERTRAND CG1031B PER DART QSI 005 4.2
OR POWDER COAT HYBRID SAFETY YELLOW (4.3.5.12) PER DART QSI 005 4.3 $\triangle D$
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY PER DART QSI 044 6.1
- 7) WEIGHT -1: 0.26 lbs
-3: 0.23 lbs

RELEASED
2012-10-01
MD

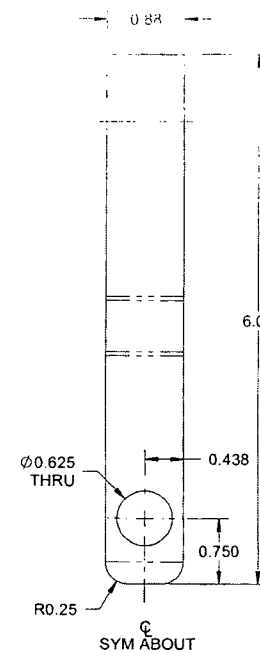
DESIGN	AJS/DSTOW	DART AEROSPACE LTD	
DRAWN	BC	HAWKESBURY, ONTARIO, CANADA	
CHECKED	BC	DRAWING NO.	REV. D
MFG. APPR.	AV	D3954	SHEET 2 OF 3
APPROVED	MD	TITLE	SCALE
DE APPR.	N/A	MISC MACHINED PARTS GWT KIT	NTS
DATE	12.08.10	<small>COPYRIGHT © 2009 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL. IT IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	



D3954-5 CHAIN LUG



D3954-7 RATCHET LUG



D3954-9 GWT CHAIN PIN

NOTES:

1) MATERIAL:

- 5/-7: AISI 1010-1025 MILD STEEL BAR
PER DART SPEC M1010-B
- 9: PURCHASE PART FROM MCMaster-CARR:
P/N 98381A630 (MILD STEEL)

ALTERNATE MATERIAL:

- 5/-7: AISI 303/304/316 STAINLESS STEEL BAR OR AISI 304/316 PLATE
PER ASTM A582 (303) OR A276 (304/316) OR ASTM A240 (304/316)
REF DART SPEC M303B OR M304B
- 9: PURCHASE PART FROM MCMaster-CARR:
P/N 90145A630 (STAINLESS STEEL)

- 2) FINISH -7 ONLY: SPRAY PAINT YELLOW WITH BERTRAND CG1031B PER DART QSI 005 4.2
OR POWDER COAT HYBRID SAFETY YELLOW (4.3.5.12) PER DART QSI 005 4.3

- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED

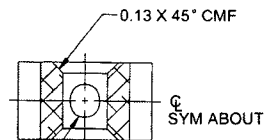
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED

- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX

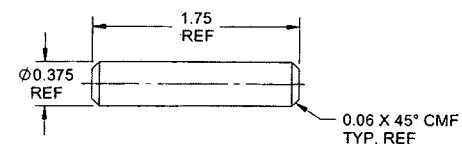
- 6) IDENTIFICATION: IDENTIFY PER DART QSI 044 6.1

- 7) WEIGHT -5/-7: 1.56 lbs EACH

- 9: 0.05 lbs REF



SECTION A-A C3-3



DESIGN	AJS/DSTOW	DART AEROSPACE LTD	
DRAWN	PC	HAWKESBURY, ONTARIO, CANADA	
CHECKED	AS	DRAWING NO.	REV. D
MFG. APPR.	AV	D3954	SHEET 3 OF 3
APPROVED	MD	TITLE	SCALE
DE APPR.	N/A	MISC MACHINED PARTS GWT KIT	
DATE	12.08.10	COPYRIGHT © 2009 BY DART AEROSPACE LTD	
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